METHYL BROMIDE PHASE OUT AND ITS IMPACT "Elimination of Methyl Bromide presents a major non-tariff barrier to international trade of agricultural products"

By Robert A. Bailey USDA FAS International Cooperation and Development

Agricultural trade will be profoundly affected by the phaseout of methyl bromide (MB). There are significant differences between the U.S. Clean Air Act (CAA) and the United Nations Environmental Program (UNEP) approach to phasing out MB, which create a potential trade barrier. The UNEP provides an essential use clause for quarantine purposes, freezes production of MB in 1995 at the 1991 level, permits reduction in production rather than total elimination under international regulations, and extends the phase out period by an additional ten years for developing countries.

The Clean Air Acts (CAA) rigid phase out policy for Methyl Bromide in the U.S. does not consider the relative costs and benefits involved in the elimination of MB, and there is no "essential use" exemption clause for quarantine purposes. The loss of MB for quarantine purposes will significantly affect U.S agricultural exports, interstate trade and the importation of both food and nonfood items into the U.S. It will place U.S producers and exporters at a disadvantage in competing in both international and domestic markets.

The UNEP will meet again the end of 1995 to review any new scientific data. At that time the EPA will focus on trying to convince UNEP member countries to harmonize the UNEP with the CAA protocol, so there will be a unified resolution on the phase out of MB to ensure a level playing field worldwide. The EPA has also stated that they will not ban the entry of any product treated with MB offshore, as it will not fall under the CAA. If no alternative can be found in time, the EPA will consider establishing an "essential use" clause for quarantine purposes.

When one looks at the uses and versatility of MB, the development of alternatives becomes a difficult task. The search for alternatives for quarantine/post harvest and preplant purposes faces a series of complex problems.

The time frame involved, until the year 2001, may seem ample to develop a sufficient number of alternatives; however, the research process, evaluation and review, and registration of alternatives with the EPA will take an extensive amount of time.

The U.S has approximately five crop seasons left to establish suitable alternatives for a wide array of both food and nonfood commodities.

The rapid growth of the non-traditional agricultural export industry worldwide has resulted in a significant increase in fumigations at U.S. ports of entry (POE). There has been an increase in fumigations of 13.6 percent over four years. This increase includes products infested with quarantine pests as well as products imported with a MB treatment as a condition of entry. In 1990 there were 5,429 fumigations, using 385,525.27 pounds of MB. In 1994 there were 6,286 fumigations, using 379,856.25 pounds of MB.

ALTERNATIVES: Post harvest and quarantine alternatives will depend upon the commodity. Durables, such as tobacco, bulk grain and cotton, have alternative chemicals such as Phosphine and Chloropicrin. However, in the case of perishables such as fresh fruit, vegetables and cut flowers, no such chemical fumigant exists.

Some of the chemical and nonchemical alternatives that are being considered are pesticide dips, phosphine, controlled atmosphere, vapor heat, hot water dip, forced hot air, irradiation, cold treatment, recovery and recycle systems, genetic engineering, cultivar resistance, system approach, pest free zones, export certification, and preclearance inspection.

PROBLEMS WITH ALTERNATIVES:

The Alternatives for MB must be cost effective on a commercial scale. Any viable alternative must have a reasonable cost benefit ratio before anyone invests in a commercial facility. There are very few commercial scale alternative facilities at this time.

Alternative treatment research has its priorities, and the primary focus will be on U.S exports. Research on alternatives is non existent in developing countries, where complaints of being left out of the process will not aid or support the U.S. position on total worldwide phase out.

The USDA will have to review and change its policy and establish an acceptable safeguard protocol if treatment is to be permitted at facilities in controversial areas/states. In the past APHIS has not permitted any fruit fly host material to move through Florida or California.

Some of the non-chemical approaches to quarantine treatment often require extremely lengthy treatment times, as in the case of cold treatment.

Non chemical approaches will have specific, limited application. Certain types of treatments, such as hot water dip, will have to be conducted in the exporting country under a USDA APHIS preclearance program.

Systems approaches and free zones both require a certain level of institutional capability in the exporting country. This level of technology may continue to elude developing countries, which will then have to rely on the UNEP quarantine exemption. If these types of approaches are to be taken, it will require technology transfer and major training efforts to develop the capacity to implement them.

When MB is phased out in the U.S., commodities that require fumigation as a condition of entry will have to be treated offshore. This will require the establishment of many additional preclearance programs by the USDA. If the demand for preclearance programs goes up, will the USDA be able to supply the needed personnel given the recent focus on downsizing the USDA? Refusing preclearance due to a lack of trained personnel may be considered a non-tariff barrier to trade, by the international community.

U.S. At A DISADVANTAGE: The U.S. approach to phasing out MB will put U.S. producers, importers, and exporters of agricultural commodities at a serious disadvantage in a highly competitive world market. U.S. producers of winter fruits and vegetables have long complained that Mexico, a major player in the U.S. fruit and vegetable market, has a distinct edge in competing in the U.S. Mexico is considered a developing country under Article Five by the United Nations, and will have not only the quarantine exemption but may get the additional ten year phase out (2011) for preplant use. The Clean Air Act phase out policy of MB will further incite U.S. producers to move their production offshore.

U.S policies on the environment, especially unfunded mandates like the Clean Air Act, need to be more in tune with the world (UNEP) position. The problem of ozone depletion is on a global scale and should be regulated solely on a universal level and not double regulated by the U.S. Clean Air Act. Also, before U.S. policy makers consider environmental regulations they must thoroughly review the costs and benefits, and if the act/policy is one that will effect the world environment, the approach must be unified and equitable in its implementation.

Alternatives in the U.S. are forthcoming at a torpid pace due to inadequate funding, a slow regulatory promulgative process, and the high cost and limited application of potential alternatives. It is highly unlikely that the U.S. will have a sufficient number of commercial alternative treatment facilities in place by the 2001 deadline. A very plausible scenario is that more U.S producers will move their production operations offshore to take advantage of the UNEP program exemptions and delayed phase out. Foreign exporters may begin to trans-ship through Mexico so that if pest problems arise infested cargo can simply be returned to Mexico for MB treatment right at the border and shipped back over the very same day.

Countries desiring an export certification program will increasingly request training and technical assistance from the U.S. The USDA is not in a position to provide export certification training at this time. Preclearance programs will have to be established for all commodities requiring MB treatment as a condition of entry, which will seriously drain the finite manpower of USDA/APHIS. If the U.S. cannot provide these services it may be accused of erecting technical and phytosanitary barriers to trade.

SOURCES of INFORMATION

USDA-ARS . A Research Agenda for the 1990s, Methyl Bromide Substitutes and Alternatives. January 1993.

USDA-APHIS-PPD. <u>Economic Impact of Losing Methyl Bromide as a Quarantine Treatment for Nine Selected Commodities</u>. C. Tuszynski and J. Grimes.

Crop Protection Coalition. <u>National Agricultural Research</u>
Needs Resulting from Regulatory Actions on Methyl Bromide.

Compendium of Papers Presented. Annual International Research Conference on Methyl Bromide Alternatives and Emission Controls, Kissimmee FL, November 1994.

EPA, Office of Stratospheric Protection, Methyl Bromide Program, Washington, D.C.

<u>Quarantine Treatments for Pests of Food Plants</u>. Westview Studies in Insect Biology, edited by Jennifer L. Sharp and Guy J. Hallman, USDA-ARS.

World Crop Pests. 'Fruit Flies Their Biology, Natural Enemies and Control', edited by A.S. Robinson and G. Hooper

USDA-APHIS-PPQ. Treatment Manual Washington, D.C.

USDA-ERS. <u>Economic Effect of Banning Methyl Bromide for Soil Fumigation</u>. Economic Report Number 67. W. Ferguson and A. Padula.

From Battlefields to Growing Fields: A High Tech Transformation. The Packer, January 9, 1995.

USDA-ARS-NPS. Alternatives to Methyl Bromide: Assessment of Research Needs and Priorities. Committee for USDA Workshop on Alternatives to Methyl Bromide.

June, 1993.

USDA. The Biological and Economic Assessment of Methyl Bromide. National Agricultural Pesticide Impact Assessment Program, April 1993.

USDA-APHIS-Technical & Science Services. Summary Report of USDA/APHIS Fumigation Records, FY 90-94.